Raw Materials Around the World
Latin America

Lorena del Pilar Muñoz del Campo
• In the first 150 years of conquest, 17 thousand tons of silver and about 200 tons of gold arrived in Spain and promoted the incipient commercial and manufacturing development.

• American gold and silver helped, and energized the economy of major European capitals and detonated the Industrial Revolution. Capitalism displayed its maximum possibilities of development in the most advanced countries of the time, where the accumulation of capital was essentially based on pillage and world distribution.
Clash of Civilizations
The Spanish conquest altered the functioning and organization of indigenous economies

- Spanish triumph altered an economical system based on sustainable management of resources, reciprocity and redistribution.

- The conquerors took the place of the leader in the social hierarchy, receiving all the tributes but they broke the principle of redistribution and the surplus (profit) did not return to the communities.

- In addition, with the introduction of the currency and the market, the conquerors destroyed the principle of reciprocity.

- Amerindian population was forced to “buy and sell”, leaving the exchange of products between communities according to what each one produced.
Clash of Civilizations
The Spanish conquest altered economical structure of Latin America

- The closed economies of amerindian civilizations were modified to constitute a world market.
- “The “discoveries” of gold and silver deposits in America, had as consequence the enslavement of indigenous populations, forced to work inside of the mines, the beginning of the conquest and the plundering of the Indies, are all facts that indicate the dawn of the era of capitalist production (...) Riches captured outside Europe for pillage, enslavement and slaughter refluxed into the metropolis where they were transformed in capital ” Letter from F. Engels to C. Schmidt, 17/10/1890

- A century after the arrival of Columbus to the Caribbean Sea, 90% - 95% of the 60 million of pre-existing indigenous people were killed (due to slavery, deseases imported from Europe and war against conquerors), and only 3,5 million souls remained (at the same epoch European population was app 70 - 88 millions) Darcy Ribeiro, Las Américas y la Civilización

We were gods wearing jewels and feathers, we were the custodians of mother nature. Conquerors brought to us deseases, death and destruction.
Mineral resources and the model of extraction

Spanish Empire implemented in Latin America and extractive model without tacking care of neither human life nor environment impact, sole objective was to extract as much as they could in a short period of time. Between 1500 and 1800, Spaniards got 120 billion dollars (actual value).

After 500 years, former colonies - now independent countries - continue with the very same model. The conqueror is replaced by a transnational corporation.

In some of our countries, Amerindian communities are part of the concession until today.

Gold and Silver Extracted from the Spanish Colonies

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<thead>
<tr>
<th>Period</th>
<th>Silver (kg)</th>
<th>Gold (kg)</th>
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<tr>
<td>1531 - 1540</td>
<td>86.193</td>
<td>14.466</td>
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<td>1541 - 1550</td>
<td>177.573</td>
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<td>1551 - 1560</td>
<td>303.121</td>
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<td>1561 - 1570</td>
<td>942.858</td>
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<td>1571 - 1580</td>
<td>1.118.591</td>
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<td>1621 - 1630</td>
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<td>1631 - 1640</td>
<td>1.396.759</td>
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<td>1651 - 1660</td>
<td>443.256</td>
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<td>TOTAL</td>
<td>16.886.815</td>
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Selected countries, regions and groupings: composition of the value of exports of minerals and metals by degree of processing, average 2015-2017 (in percentages / by region)

LAC keeps high proportion of primary products in its exports
Status of mineral resources in Latin America (2018)

USGS Mineral commodity summaries 2018


data representation

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<th>Mineral</th>
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<th>Oceanía</th>
<th>Norte América</th>
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Cluster of copper, iron, and other represent 77% of Latin American Export

Chile, Peru Argentina and Brasil represent 85% of export of minerals in Latin American and Caribbean Region.

Latin America and the Caribbean has significant mineral reserves

The region is a net exporter of minerals and strengthened its primary export specialization

The super-cycle of commodity prices improved terms of trade, increased exports, generated extraordinary income and boosted economic growth, but did not lead to productive diversification

Argentina, Chile, Mexico and Brazil concentrate principal reserves of Iron, Gold, Copper and Lithium - Percentages over total of the world

Source: USGS mineral commodities summaries 2018
ECLAC (2018)
The weight of minerals in the exports of Latin American and the Caribbean is 4 times more than other regions in the planet.
Estado de situación de la minería en América Latina y el Caribe

Alicia Bárcena

Canadá es el mayor inversor en minería metálica en la región y el mundo, seguido de Reino Unido.

FDI announcements in metal mining in Latin America and the Caribbean, by country of origin, 2003 - 2018

Fuente: Comisión Económica para América Latina y el Caribe (CEPAL) sobre la base de información de fDi Markets (incluye estimaciones). Datos actualizados al 17 de octubre de 2018.

Datos enero – agosto 2018.
The demand for minerals will intensify in the future and the region has an important base of reserves and production

- Increase in world population
  - Urbanization
  - Greater infrastructure
  - Generation, interconnection and distribution of energy and electricity
  - Increased demand for final goods
  - Mobility
- Economic growth and changes in consumption pattern
  - Income growth (India and China as main drivers of commodity demand)
  - Increase middle class in the world (greater purchasing power)
- Technological change
  - National and international action against climate change ➔ Transition of fossil energies to energy generation technologies
  - non-conventional renewable

**Electromobility (Energy storage batteries)**
- Demand derived from industry 4.0
- Internal changes in the extractive industry
- Technological change that facilitates the development of new deposits in more difficult places
- Adoption of “green mining” to minimize the environmental footprint
Important environmental challenges of mining in the region persist:

- Water, air and soil contamination of the extraction, smelting and transportation processes
  - Surface runoff, infiltration and acid drainage.
- Dragging particulate material
- Extreme events (earthquakes, run offs, others) and physical stability of tailings deposits
- Competition for water use (basins and reservoirs)
  - First priority is always mining activity
  - Normally mining activity cause an impact in water availability and water quality
- Destruction of habitat and protected areas
  - Superposition of mining areas on areas of importance to biodiversity
  - Superposition of mining activities on patrimonial sectors
- Numerous environmental liabilities
  - Present and past practices
  - Environmental liabilities ans neither declare nor compensate
  - Not all countries has legislation related to this point
  - Activity normally lack of environmental permits or environmental compliance
- Informal high risk activities and illegal (mercury)
LAC concentrate high number of socio-environmental conflicts related to mineral exploitations

The number of mining conflicts recorded in recent years has increased in most countries with especially in mining production.

At present time, 22 cases of human rights violation in 9 LAC countries implicate 20 companies based in Canada. Companies are also involved in corruption, eater rights and after pollution issues.

Source: Observatorio Latinoamericano de Conflictos Ambientales (OLCA, 2014)
Source: Observatorio de Conflictos Mineros de América Latina (OCMAL, 2018)
Los conflictos mineros representan una parte importante del total de conflictos en los países de la región.


Nota: Los conflictos se agrupan en las siguientes categorías: Nuclear, minerales, manejo de basura, biomasa y conflictos de tierras, combustibles fósiles y justicia climática, manejo de agua, infraestructura, turismo, conflictos conservación de la biodiversidad y conflictos industriales.

Socio-Environmental problems per country in LAC region as percentage over the total amount of conflicts.

Conflicts are grouped in categories: Nuclear, minerals, waste management, biomass and land conflicts, fossil fuels and climate justice, water management, infrastructure, tourism, biodiversity conservation conflicts and industrial conflicts.

Governance:
In LAC a need of governance at both points of the equation - a need of precise policies at origin (where transnational is based) and the point (countries where activity is develop)

- In Our countries:
  - Requires public policies that involve regulatory, institutional, fiscal, strategic planning and management of socio-environmental problems/conflicts.
  - Demands a long-term vision that allows institutional innovation to maximize social benefit in the present and in the future.
  - Change paradigm of actual extraction (in place for 500 years) and transit to sustainable extraction (implication investment in management of environmental liabilities)

- At origin:
  - Will implicate to the set fair conditions and respect to the sovereign ownership of natural resources the appropriation and distribution of productivity gains, and the compensation of costs.
  - Actually concession in LAC region last 100 years
  - Full recognition of environmental liabilities and social externalities
  - Demonstrations of exploitation plans need to be demonstrated at origin before awarding the mining concession.

"Show me the rock where you felt
And the wood where you were crucified.
Light with the old flints
The ancient lamps, the whips stuck
In your wounds through centuries
And the axes of bloody shine.
I came to speak through your dead mouth."

Pablo Neruda